

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,239,146 B2
APPLICATION NO. : 10/618095
DATED : July 3, 2007
INVENTOR(S) : James et al.

Page 1 of 2

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In column 11, line 13, below "the cell."

insert -- 18. A system comprising:

an energy storage cell;

a current source/sink circuit, coupled to the cell, to draw a substantially constant first current pulse;

a voltage measurement circuit, coupled to the cell, to measure first and second voltages during the first current pulse;

means for measuring a first change of a terminal voltage across the cell during the first time period, in which the measuring the first change of the terminal voltage comprises measuring a polarization angle;

a difference circuit, coupled to the voltage measurement circuit, to compute a difference between the first and second voltages; and

a processor circuit, coupled to or including the difference circuit, the processor circuit including a memory circuit to store first data relating cell capacity to the difference between the first and second voltages, the memory circuit also including a cell capacity indicator storage location to provide an indication of cell capacity, the processor configured to use the difference between the first and second voltages obtained from the difference circuit and the polarization angle and the stored first data indicative of cell capacity to provide the indication of cell capacity. --

In column 12, line 1, in claim 18, delete "18." and insert -- 28. --, therefor.

Col. 12 lines 1-2

Should read

-- 19. The system of claim 18, in which the energy storage cell comprises a manganese dioxide battery cell. --

Col. 12 lines 3-4

Should read

-- 20. The system of claim 18, in which the energy storage cell comprises a silver vanadium oxide cell. --

Col. 12 lines 5-6

Should read

-- 21. The system of claim 18, in which the voltage measurement circuit is also configured to measure a quiescent voltage. --

Col. 12 lines 7-8

Should read

-- 22. The system of claim 21, in which the processor is configured to compare the measured quiescent voltage to a predetermined threshold to distinguish between two different stored cell capacity values that correspond to a single difference in terminal voltage across the cell. --

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Col. 12 lines 9-10 Should read

-- 23. The system of claim 21, in which the memory circuit is also configured to store second data relating cell capacity to the quiescent voltage, and in which the processor is configured to compare the measured quiescent voltage to the second data to determine the energy remaining in the cell. --

Col. 12 lines 11-13 Should read

-- 24. The system of claim 23, in which the processor is configured to determine the energy remaining in the cell using the difference, during an earlier portion of a life of the cell, and using the measured quiescent voltage, during the later portion of a life of the cell. --

Col. 13 lines 1-3 Should read

-- 25. The system of claim 18, in which the processor is configured to compare first and second differences to distinguish between two different stored first data values that correspond to a single stored difference. --

Col. 13 line 4 Should read

-- 26. The system of claim 18, in which the processor is located within an implantable medical device. --

Col. 13 line 5 Should read

-- 27. The system of claim 18, in which the processor is located within an external remote interface device. --

Signed and Sealed this

Twenty Second Day of April, 2008

A handwritten signature in black ink, appearing to read "Jon W. Dudas". The signature is stylized with a large, looped initial "J" and a distinct "D".

JON W. DUDAS
Director of the United States Patent and Trademark Office